

Owner's Manual

Manual de Operación



CAUTION
SAVE AND READ THESE
IMPORTANT INSTRUCTIONS

Read all instructions carefully before setting up and operating this unit. This manual was designed to provide you with important information needed to setup, operate, maintain, and trouble-shoot your cooler. Failure to follow these instructions may damage and/or impair its operation and void the warranty.

NOM PRECAUCIÓN
LEA Y CONSERVE ESTE MANUAL

Lea todas las instrucciones cuidadosamente antes de montar y operar esta unidad. Este manual fue diseñado para proveerle importante información necesaria para instalar, operar, mantener y detectar problemas en su enfriador. La falla en seguir estas instrucciones puede dañar y/o afectar la operación del enfriador y anular la garantía.

U.S. Models:

SPM20, SPM30, SPM45

impco

email: customerservice@impcolc.com, Website: www.impcolc.com

INTRODUCTION

Evaporative cooling works on the principle of heat absorption by moisture evaporation. Simply put, heat is removed from the air as water evaporates. You feel this principle in action when you step out of a swimming pool or shower; you feel immediately cooler as water evaporates from the surface of your skin.

Your evaporative cooler works on the same principle. Hot outside air is pulled through water-saturated pads, where the air is cooled by evaporation and then discharged from the cooler.



WARNINGS AND SAFETY RULES

WARNING...

To reduce the risk of electric shock, fire or injury:

- Read instructions and labels carefully.
- Always unplug the electric cord to your cooler before you work on the cooler.
- Your cooler will run on 120 Volt AC, 60 Hz (cycle) current only.
- Plug into three-prong grounded GFCI protected electrical receptacle only.
- Do not operate if plug or cord are damaged in any way.
- Do not step on or roll over power cord with heavy or sharp objects.
- Do not operate unit unless all panels are securely in place.
- Remove the plug from the electrical receptacle by pulling on the plug and not the cord.
- Test the GFCI receptacle or breaker monthly to ensure it is functioning properly.
- Do not operate near open containers of flammable liquids or gases.
- Never wash your cooler cabinet with a garden hose; water may harm the motor and pump.
- If the unit is damaged or it malfunctions, do not continue to operate it. Refer to the warranty or troubleshooting section at www.impcollc.com

Other Symphony Units



R28RTE



Hi Cool



ASSEMBLY INSTRUCTIONS

Unpacking the Mobile Symphony. The unit is shipped with the casters (wheels), grille and the top tray inside the cabinet.

Grille Installation. Before attempting to use your new Mobile Symphony cooler you must complete the grille installation.

Attaching the plastic tray. Remove the side pad frames from the cooler by lifting them up and out of the cooler cabinet. Locate the parts bag in the cooler and attach the tray top using the push rivets provided. (Picture 1)

Installing the casters. Some models ship with the wheels already attached to the cabinet bottom. If wheels are not attached then locate the wheels inside of the cooler and attach them to the cabinet bottom using the bolts included.

Installing the grille. Refer to the installation instructions in the grille bag.

Installing the drain bushing and standpipe. Refer to Figure 2 and install the drain bushing and standpipe through the hole provided in the bottom of the cooler.

Installing the float valve and adapter. Refer to Figure 3 and attach the float to the side leg of the cooler using the hole provided. The garden hose adapter attaches to the brass inlet fitting on the float valve. (Picture 2). Verify that the hose washers are properly in place. Position the pump snug to blower housing to prevent contact with the pads.

Connecting to Water. Move the cooler to an area where it can be filled with water and drained. The cooler should be located on level ground. Connect to a water supply using a commercial grade garden hose (supplied by customer) connected to the adapter on the float valve and turn on the water. Verify water tight connections by visually examining both the float/hose connection and the drain plug. (Picture 2)



CAUTION: Water inlet pressure should be limited to a maximum of 105 PSI or an inline pressure regulator should be installed.

Adjusting the water level. Refer to Figure 3 and set the water height as shown by adjusting the float.

Connecting to a Power Supply. Plug the grounded plug directly into a 120 Volt AC 60 Hz grounded GFCI protected electrical power supply. **Note:** Improper voltage will burn out the motor and pump windings and will void the warranty.

TOOLS REQUIRED

- 3/8" Open End Wrench
- 3/8" Box End Wrench
- 6" Adjustable Wrench
- 7/16" Box End Wrench
- #2 Phillips Screwdriver

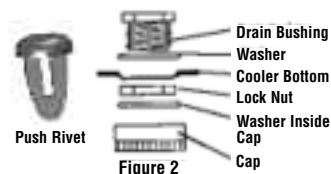


Figure 2



Figure 3

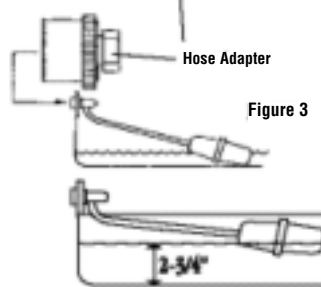


Figure 4

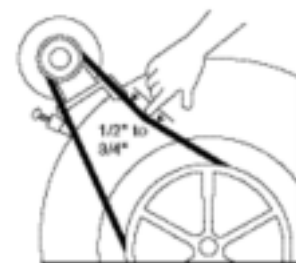


Figure 4

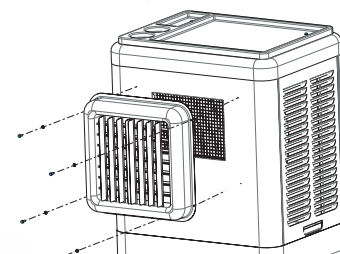


Figure 5



Picture 1



Picture 2



Picture 3



LOCATION

Always make sure the unit is operated on a level surface. When using indoors, the best location for it is near a partially opened window or door where hot outdoor air can be drawn into the unit. This cooler is portable, but use caution when rolling the unit to avoid splashing and spilling of water. Cool air can best be directed through the space by using a partly opened window or door, ideally one that is situated on the opposite side of the

space from the cooler. This allows the cooled air to be moved through the space and exhausted back outdoors which is critical to proper performance of the cooler.

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USE & OPERATION

1. Turn on the water supply to the cooler. The hose connection to the float valve provides an automatic method of refilling the water supply as water evaporates.
2. For best results, turn the pump on a few minutes before turning on the blower fan. This allows the cooling pads to pre-wet for best efficiency.
3. When cooling is not required you can operate the unit as a fan by turning on the blower fan only and leaving the pump turned off.
4. The water can be adjusted by tightening or loosening the clamp that pinches the water supply tube. Adjust the water flow clamp so that adequate water is supplied to the pads without excess water splashing out of the trough during normal operation.



CAUTION
Do not operate the unit with pads or grille removed.



CAUTION
Unplug the electrical cord to the cooler before attempting to work on or service the cooler.



CLEANING & MAINTENANCE

Periodic Drying of Pads. For best results allow pads to dry after each operation by turning off the pump 15 minutes before turning off the fan blower motor.

Periodic Draining of Sump. The entire water sump should be drained at least once weekly to reduce mineral build-up. The failure to regularly drain the entire water sump will greatly increase the mineral deposits and reduces the expected life of the cooling pads. This could result in early replacement of the pads at the owner's expense. Use a damp cloth and wipe off any mineral deposits that appear outside or inside the unit at least once per week of use.

Lubrication. The pump and blower motors do not require lubrication. For belt driven blower wheel models only, the blower shaft bearings need periodic lubrication. The oil cups on the blower shaft bearings should be filled with a good grade SAE20W or 30W oil when necessary. Under normal use, oiling is required every three months of operation. **DO NOT OVER OIL.**

Cleaning Water Pump. (Pictures 5 and 6) Disassemble and clean the water pump as follows.

- Disconnect power supply to the cooler.
- Access the pump by lifting the pad frames up and out of the cooler. Remove pump from cooler.
- To prevent breakage, carefully release the four snap-out tabs and lift impeller base plate from the pump body. (Picture 5)

- Use a mild detergent solution and wash all deposits from the inside around the impeller and impeller base plate.
- Spin the impeller to dislodge any foreign material. (Picture 6) Rinse and reinstall impeller base plate.
- Reinstall pump into the cooler.



CAUTION
Do not allow the pump to fall over and become submerged in the water. Water will damage the pump motor.



Picture 5



Picture 6



ELECTRICAL

Electrical wiring on your unit is not required as the unit has been wired at the factory. For your future reference, the wiring diagram in Figure 7 shows rocker switches, two-speed motor, capacitor and pump.



COOLING PAD REPLACEMENT

The cooling pads should be replaced with fresh aspen fiber at least once a year, at the beginning of each cooling season. The need to change pads varies with locality and how much dust, alkali and other foreign matter accumulates in pads. If cooling efficiency is impaired, it may be desirable to change pads several times during a cooling season.

Replacement Instructions:

To remove pad assemblies from the unit, lift up, pull out and then down. Lay the metal side down on a flat surface and remove the pad retainers. The aspen filters can now be removed. Rinse off pad assembly, then install new aspen filter and retainer. Replacement filter pads are available at your cooler dealer.



Picture 7



Picture 8

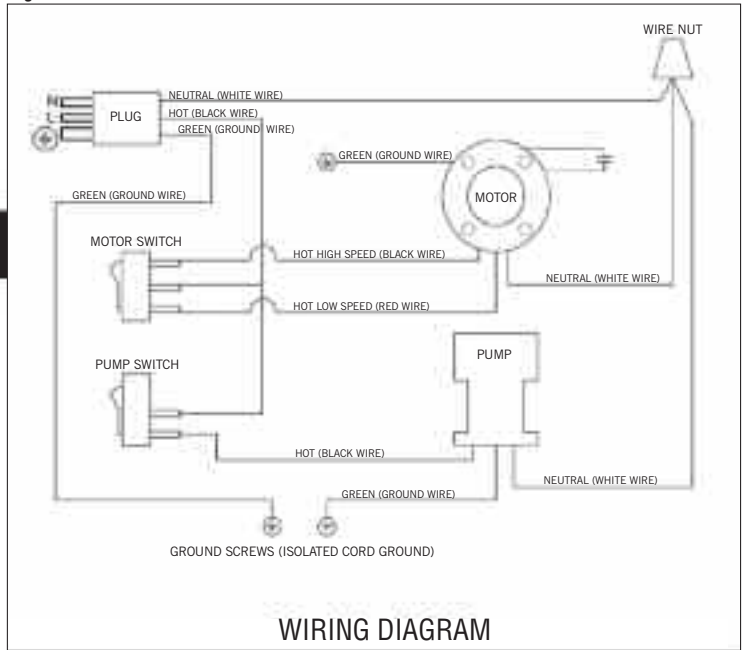


Picture 9



Picture 10

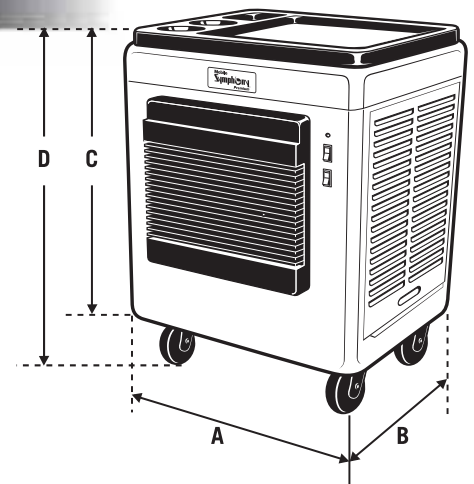
Figure 7



SPECIFICATIONS AND DIMENSIONS

Motor	Frequency	Volts	Current
1/8 HP	60 Hz	120 V~	3.6 A

Dimensions (in)				Water Capacity	Shipping Weight
A	B	C	D		
22	19	23.6	29	4.5 Gallons	65 lb



Mobile Symphony Premium Owner's Guide

COOLING PAD MAINTENANCE

Periodic draining of the pump will help reduce the build-up of calcium deposits on the pad and pad frame. Periodic cleaning of the pads will also help increase the life of the pads and the cooling performance of the cooler. Do not attempt to clean the pads while they are installed in the pad frames or in the cooler. They must be completely removed from the cooler (see Cooling Pad Replacement on this page) and then can be hosed off and lightly brushed to remove or reduce the calcium build-up. Pads must be replaced, though, if the calcium build-up starts to completely block air passages through the pad.

COOLING PAD REPLACEMENT

The cooling pads should be changed at least every two years. Check and clean them at the beginning of the season and clean and reverse them in the middle of the season. The pads may need to be replaced more frequently depending on local conditions and the maintenance schedule followed.

Replace cooling pads as follows:

Remove pad frames from the cooler by lifting them up and outward. Place pad frame on a flat surface and remove the two plastic rivets securing the assembly. Using a flat screw driver, pry up the rivet heads until they pop out or you can grab them (See figure 7). Slide the pad retainer out of the groove in the pad and out of the pad frame (See figure 8). Remove the pad by lifting up and sliding the pad out of the bottom groove (See figure 9). Lift out the distribution media and the water deflector (See figure 10 and 11). Use a mild detergent and wash dirt and build-up from the pad frame. Do not use a wire brush or scouring pad. Rinse the pad frame with clean water and, if reusing the existing cooling pad, rinse the pad, rinse the pad with fresh water to remove as much deposit build-up as possible. Replace the water deflector and the distribution media in reverse order of removal. Lay new cooling pads in frame (or rotate old pads and lay in frame). Remember that the media should be placed in the frame starting at the bottom ensuring the edge of the pad frame fits snugly into the slot on the bottom of the pad. Push the pad down into place. Slide the pad retainer under the flanges of the pad frame.

Carefully push on the pad so that the pad retainer slides into the groove (arrow in figure 12) in the pad. Replace plastic rivets by lining up the holes and pushing the rivets in place.

Pre-soak the pad and re-install the pad frame into the cooler.

Start the pump and make sure that water flows properly through the pad.

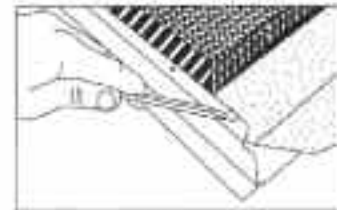


FIGURE 7

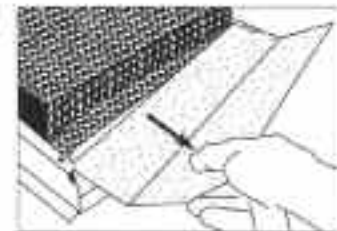


FIGURE 8



FIGURE 9

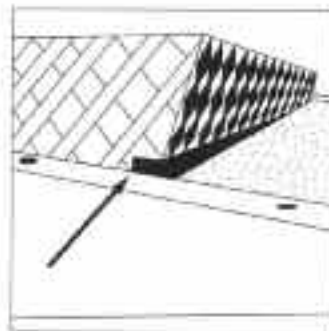


FIGURE 12



FIGURE 11

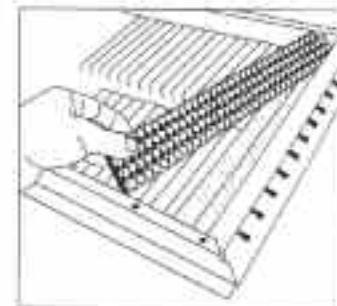


FIGURE 10



TROUBLESHOOTING

The following troubleshooting guide is intended to address the most common symptoms and is by no means exhaustive. If symptoms persist, call a qualified service provider. Only a certified electrician should complete electrical work. Turn off all power to the cooler before attempting to troubleshoot any of the following symptoms.

SYMPTOM	POSSIBLE CAUSES	REMEDY
Unit fails to start or deliver air	<ol style="list-style-type: none"> 1. No electrical power to unit <ol style="list-style-type: none"> A. Fuse blown B. Circuit breaker tripped C. GFCI tripped D. Cord(s) unplugged or damaged 2. Motor overheated (thermally protected) 3. Motor frozen 4. Motor able to free spin 	<ol style="list-style-type: none"> 1. Check power <ol style="list-style-type: none"> A. Replace fuse* B. Reset breaker* C. Reset GFCI* D. Plug in cord(s) or replace if damaged * <i>If condition persists, call an electrician</i> 2. Try to restart after cool down 3. Replace motor 4. Replace capacitor
Unit starts but air delivery is inadequate	<ol style="list-style-type: none"> 1. Insufficient air exhaust 2. Insufficient water – pad not wet <ol style="list-style-type: none"> A. Cooling pads clogged B. Dry streaks on pads C. Large dry spots on pads D. Pump not working E. Loose water connections 	<ol style="list-style-type: none"> 1. Open windows or doors 2. Check water distribution system <ol style="list-style-type: none"> A. Clean or replace pads B. Check water level C. Make sure cooler is level D. Clean or replace pump E. Check for leaks and correct
Water draining from cooler	<ol style="list-style-type: none"> 1. Float arm improperly adjusted 2. Seat in float valve leaking 3. Drain bushing not tight 	<ol style="list-style-type: none"> 1. Adjust float to proper level 2. Replace float valve 3. Tighten fitting
Musty or unpleasant odor	<ol style="list-style-type: none"> 1. Stale or stagnant water in sump 2. Pads mildewed or clogged 3. Pads not completely wet before cooler is turned on 	<ol style="list-style-type: none"> 1. Drain, flush and clean sump 2. Replace pads 3. Turn on pump before starting fan
Knocking, shaking or rattling sounds	<ol style="list-style-type: none"> 1. Loose parts 2. Blower wheel loose or rubbing 	<ol style="list-style-type: none"> 1. Check and tighten where needed 2. Inspect and adjust, or replace
Water droplets in the discharged air stream	<ol style="list-style-type: none"> 1. Too much water delivered to the cooling pads 2. Outdoor humidity level is too high or it is raining 	<ol style="list-style-type: none"> 1. Make sure pads are properly positioned in the pad frames and that the unit is level. If necessary, reduce the flow of water to the pads by tightening the screw on the hose restrictor clamp found on the pump discharge hose. 2. Use cooler as a fan only (turn pump off) or discontinue use of cooler until outdoor humidity level drops.

NOTE



Do not use cooler cleaners, cooler treatments, or other additives in this evaporative cooler. The use of any of these products will void your warranty and may impair the life of your evaporative cooler.



WARRANTY

1-YEAR LIMITED WARRANTY

Impco, Phoenix, Arizona, extends this limited warranty to the original purchaser of a Mobile Symphony Evaporative Cooler operated under normal conditions within the continental United States.

- I. One Year Coverage applies to all components and accessories furnished by Impco. At our option, we will exchange or repair any part which fails due to non-conformance of material or workmanship during the first year from the date of initial purchase.
- II. **What this warranty does not cover:**
 - a. This warranty does not cover any failure or damage resulting from unauthorized modification or service; or from the use of products or replacement parts other than those from Impco; including, but not limited to, motors and pumps.
 - b. This warranty does not cover any damage or malfunction unless caused by a non-conformance in material or workmanship. Damage or malfunction which is not covered by this warranty includes, but is not limited to, water damage to the motor, abuse, misuse, alteration, improper installation / maintenance / operation, and transportation damage.
 - c. Mineral accumulations, dirt, and dust on the pad are not defects and are excluded from this warranty. Refer to the Owners' Manual section for maintenance instructions to help minimize these conditions.
 - d. This warranty does not cover the cost of a service call at the site of installation to diagnose cause of trouble, the cost of labor to install the part, or mileage allowance to or from the site. Impco does not pay freight or postage on any exchange.
 - e. This specific warranty does not cover evaporative coolers installed and operated outside the continental United States.
- III. **Do not use cooler cleaners, cooler treatments, or other additives in this evaporative cooler. The use of any of these products will void your warranty and may impair the life of your evaporative cooler.**

- IV. To obtain service under this warranty, contact the dealer where you purchased your evaporative cooler. As a final step, if you cannot locate your dealer, contact Customer Service, the model number and serial number of your evaporative cooler, date of installation, and a description of your problem.

Impco

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This warranty is the only warranty extended by Impco to suppliers and/or purchasers of this evaporative cooler. Impco disclaims all other warranties, express or implied, that arise by the operation of the law, except that implied warranties of merchantability or fitness for a particular purpose are limited to the duration of the warranty period. Impco shall not be liable for any incidental or consequential damage which may have resulted from any alleged breach or warranty.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the limitations or exclusions stated above may not apply to you.

This warranty gives you specific legal rights and you may have other rights, which vary from state to state.

Since Impco, follows a policy of continuous product improvement; it reserves the right to change design and specification without prior notice or liability.

For information on the entire family of Symphony cooling solutions, visit us online at www.impcollc.com.